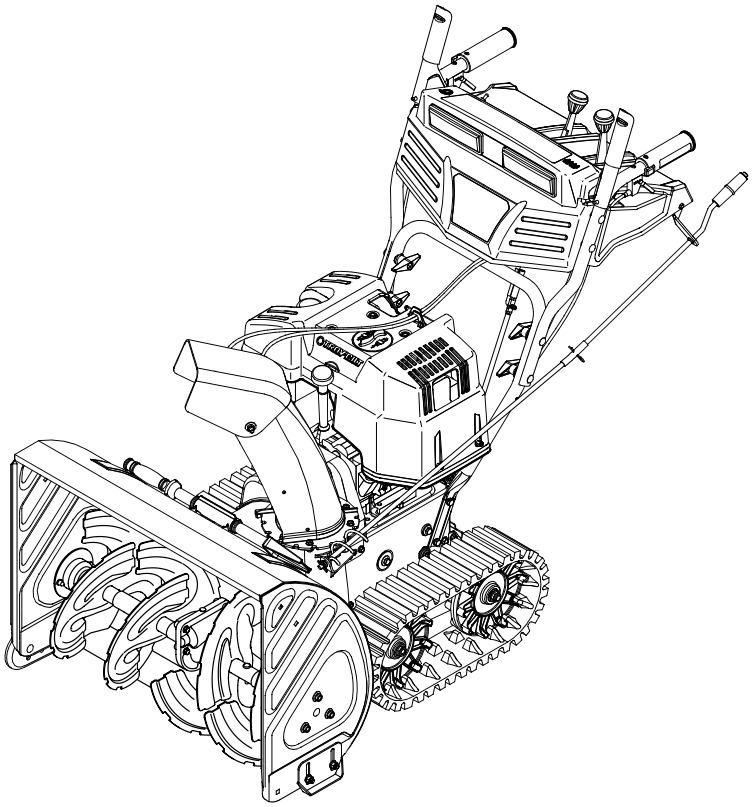
TROY-BILT®

Operator's Manual



TRACK
SNOW THROWER

IMPORTANT:
Read safety rules and instructions carefully.

TROY-BILT , P.O. BOX 1386, 97 KENT AVE., KITCHENER, ON N2G 4J1

772C0767
(5/2005)

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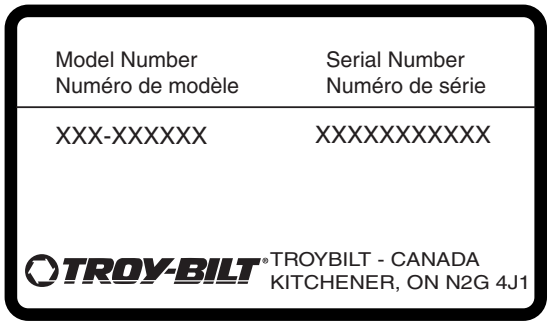
FINDING MODEL NUMBER

This Operator's Manual is an important part of your new snow thrower. It will help you to assemble, prepare and maintain the unit for best performance. Please read and understand what it says.

Before you start assembling your new snow thrower, please locate the model plate on the equipment and copy the information from it in the space provided below. The information on the model plate is very important if you need help from our Customer Support Department or an authorized dealer or manufacturer's website.

- You can locate the model number by standing behind the unit in the operating position and looking down at the dash panel. A sample model plate is explained below. For future reference, please copy the model number and the serial number of the equipment in the space below.



Copy the model number here: _____

Copy the serial number here: _____

ENGINE INFORMATION

The engine manufacturer is responsible for all engine-related issues with regards to performance, power-rating, specifications, warranty and service. Please refer to the engine manufacturer's Owner's/Operator's Manual packed separately with your unit for more information.

CALLING CUSTOMER SUPPORT

Please do NOT return the unit to the retailer from which it was purchased, without first contacting Customer Support.

If you have difficulty assembling this product or have any questions regarding the controls, operation or maintenance of this unit, please call a Customer Support Representative: **1-800-668-1238**

Please have your unit's model number and serial number ready when you call. See previous section to locate this information. You will be asked to enter the serial number in order to process your call.

SECTION 1: IMPORTANT SAFE OPERATION PRACTICES

WARNING: This symbol points out important safety instructions which, if not followed, could endanger the personal safety and/or property of yourself and others. Read and follow all instructions in this manual before attempting to operate this machine. Failure to comply with these instructions may result in personal injury. When you see this symbol—**heed its warning**.

DANGER: This machine was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. This machine is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

Training

1. Read, understand, and follow all instructions on the machine and in the manual(s) before attempting to assemble and operate. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Be familiar with all controls and their proper operation. Know how to stop the machine and disengage them quickly.
3. Never allow children under 14 years old to operate this machine. Children 14 years old and over should read and understand the operation instructions and safety rules in this manual and should be trained and supervised by a parent.
4. Never allow adults to operate this machine without proper instruction.
5. Thrown objects can cause serious personal injury. Plan your snow throwing pattern to avoid discharge of material toward roads, bystanders and the like.
6. Keep bystanders, helpers, pets and children at least 75 feet from the machine while it is in operation. Stop machine if anyone enters the area.
7. Exercise caution to avoid slipping or falling, especially when operating in reverse.

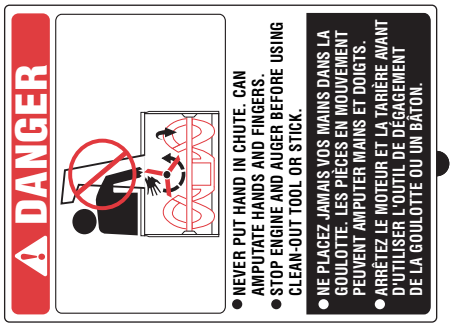
Preparation

1. Thoroughly inspect the area where the equipment is to be used. Remove all door mats, newspapers, sleds, boards, wires and other foreign objects which could be tripped over or thrown by the auger/impeller.
2. Always wear safety glasses or eye shields during operation and while performing an adjustment or repair to protect your eyes. Thrown objects which ricochet can cause serious injury to the eyes.
3. Do not operate without wearing adequate winter outer garments. Do not wear jewelry, long scarves or other loose clothing which could become entangled in moving parts. Wear footwear which will improve footing on slippery surfaces.
4. Use a grounded extension cord and receptacle for all units with electric start engines.
5. Adjust collector housing height to clear gravel or crushed rock surfaces.
6. Disengage the control handle before starting the engine.
7. Never attempt to make any adjustments while engine is running, except where specifically recommended in the operator's manual.
8. Let engine and machine adjust to outdoor temperature before starting to clear snow.
9. To avoid personal injury or property damage use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Serious personal injury can occur when gasoline is spilled on yourself or your clothes which can ignite. Wash your skin and change clothes immediately.
    a. Use only an approved gasoline container.
    b. Extinguish all cigarettes, cigars, pipes and other sources of ignition.
    c. Never fuel machine indoors.
    d. Never remove gas cap or add fuel while the engine is hot or running.
    e. Allow engine to cool at least two minutes before refueling.
    f. Never over fill fuel tank. Fill tank to no more than ½ inch below bottom of filler neck to provide space for fuel expansion.
    g. Replace gasoline cap and tighten securely.
    h. If gasoline is spilled, wipe it off the engine and equipment. Move machine to another area. Wait 5 minutes before starting the engine.
    i. Never store the machine or fuel container inside where there is an open flame, spark or pilot light (e.g. furnace, water heater, space heater, clothes dryer etc.).
    j. Allow machine to cool at least 5 minutes before storing.

Operation

1. Do not put hands or feet near rotating parts, in the auger housing or discharge chute. Contact with the rotating parts can amputate hands and feet.
2. The auger control handle is a safety device. Never bypass its operation. Doing so, makes the machine unsafe and may cause personal injury.
3. The control handle must operate easily in both directions and automatically return to the disengaged position when released.
4. Never operate with a missing or damaged discharge chute. Keep all safety devices in place and working.
5. Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
6. Do not operate machine while under the influence of alcohol or drugs.
7. Muffler and engine become hot and can cause a burn. Do not touch.
8. Exercise extreme caution when operating on or crossing gravel surfaces. Stay alert for hidden hazards or traffic.

9. Exercise caution when changing direction and while operating on slopes.
10. Plan your snow throwing pattern to avoid discharge towards windows, walls, cars etc. To avoid property damage or personal injury caused by a ricochet.
11. Never direct discharge at children, bystanders and pets or allow anyone in front of the machine.
12. Do not overload machine capacity by attempting to clear snow at too fast of a rate.
13. Never operate this machine without good visibility or light. Always be sure of your footing and keep a firm hold on the handles. Walk, never run.
14. Disengage power to the auger/impeller when transporting or not in use.
15. Never operate machine at high transport speeds on slippery surfaces. Look down and behind and use care when in reverse.
16. If the machine should start to vibrate abnormally, stop the engine, disconnect the spark plug and ground it against the engine. Inspect thoroughly for damage. Repair any damage before starting and operating.
17. Disengage the control handle and stop engine before you leave the operating position (behind the handles). Wait until the auger comes to a complete stop before unclogging the discharge chute, making any adjustments, or inspections.
18. Never put your hand in the discharge or collector openings. Always use a clearing tool to unclog the discharge opening.
19. Use only attachments and accessories approved by the manufacturer. Carefully read, understand and follow the instructions supplied with the approved accessories or attachments.
20. If situations occur which are not covered in this manual, use care and good judgment. Call customer assistance for the name of your nearest servicing dealer.


DANGER
● NEVER PUT HAND IN CHUTE. CAN AMPUTATE HANDS AND FINGERS.
● STOP ENGINE AND AUGER BEFORE USING CLEAN-OUT TOOL OR STICK.
● NE PLACEZ JAMAIS VOS MAINS DANS LA GOULOTTE. LES PIÈCES EN MOUVEMENT PEUVENT AMPUTER MAINS ET DOIGTS.
● ARRÊTEZ LE MOTEUR ET LA TARIÈRE AVANT D'UTILISER L'OUTIL DE DÉGAGEMENT DE LA GOULOTTE OU UN BÂTON.

Maintenance And Storage

1. Never tamper with safety devices. Check their proper operation regularly.
2. Disengage the control handle and stop engine. Wait until the auger/impeller come to a complete stop. Disconnect the spark plug wire and ground against the engine to prevent unintended starting before cleaning, repairing, or inspecting.
3. Check bolts, and screws for proper tightness at frequent intervals to keep the machine in safe working condition. Also, visually inspect machine for any damage.
4. Do not change the engine governor setting or over-speed the engine. The governor controls the maximum safe operating speed of the engine.
5. Snow thrower shave plates and skid shoes are subject to wear and damage. For your safety protection, frequently check all components and replace with original equipment manufacturer's (O.E.M.) parts only. "Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!"
6. Check controls periodically to verify they engage and disengage properly and adjust, if necessary. Refer to the adjustment section in this operator's manual for instructions.
7. Maintain or replace safety and instruction labels, as necessary.
8. Observe proper disposal laws and regulations for gas, oil, etc. to protect the environment.
9. Prior to storing, run machine a few minutes to clear snow from machine and prevent freeze up of auger/impeller.
10. Never store the machine or fuel container inside where there is an open flame, spark or pilot light such as a water heater, furnace, clothes dryer etc.
11. Always refer to the operator's manual for proper instructions on off-season storage.

Your Responsibility:

- Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.

Do not modify engine

To avoid serious injury or death, do not modify engine in any way. Tampering with the governor setting can lead to a runaway engine and cause it to operate at unsafe speeds. Never tamper with factory setting of engine governor.

Notice regarding Emissions

Engines which are certified to comply with California and federal EPA emission regulations for SORE (Small Off Road Equipment) are certified to operate on regular unleaded gasoline, and may include the following emission control systems: Engine Modification (EM) and Three Way Catalyst (TWC) if so equipped.

SECTION 2: ASSEMBLING YOUR SNOW THROWER

Loose Parts

The augers are secured to the auger shaft with two shear pins and bow tie cotter pins. If you hit a foreign object or ice jam, the snow thrower is designed so that the pins may shear. Two replacement shear pins and cotter pins are provided for your convenience. Store in a safe place until needed. See Figure 1.

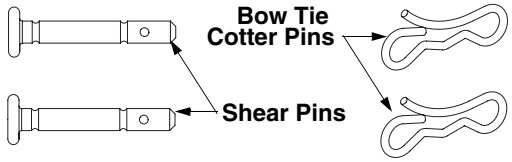


Figure 1

IMPORTANT: NEVER replace the auger shear pins with standard hex pins. Any damage to the auger gearbox or other components from using standard pins will not be covered by your snow thrower's warranty.

Items Required For Assembly

1. Pair of pliers
2. Engine oil
3. Fresh gasoline

Before Assembly

- Disconnect spark plug wire and ground it against the engine to prevent unintended starting.

NOTE: *Reference to the right hand or left hand side of machine are observed from the operating position.*

Assembling Handle

For shipping purposes, the upper handle is secured loosely to the lower handle with four wing nuts.

- Remove the **lower** plastic wing nut, cupped washer and carriage bolt from each side of the lower handle. See Figure 2.
- Raise the upper handle assembly until it locks over the lower handle.
- Look at the lower rear of the snow thrower frame to be sure all the cables are aligned with the cable roller guides. Make sure the spring (found at the end of each cable) is attached to its actuator bracket.
- Secure the upper handle and lower handle with the two plastic wing nuts, cupped washers and carriage bolts previously removed. See Figure 2.
- Tighten the two wing nuts already in place on the upper holes and secure the handles firmly.
- Slide the shift rod connector down over the end of the lower shift rod. Tap the connector until it **locks** over the lower shift rod. See Figure 2.

NOTE: *If the connector is not properly assembled, the shift rod will pivot and you will not be able to change speeds or direction of movement.*

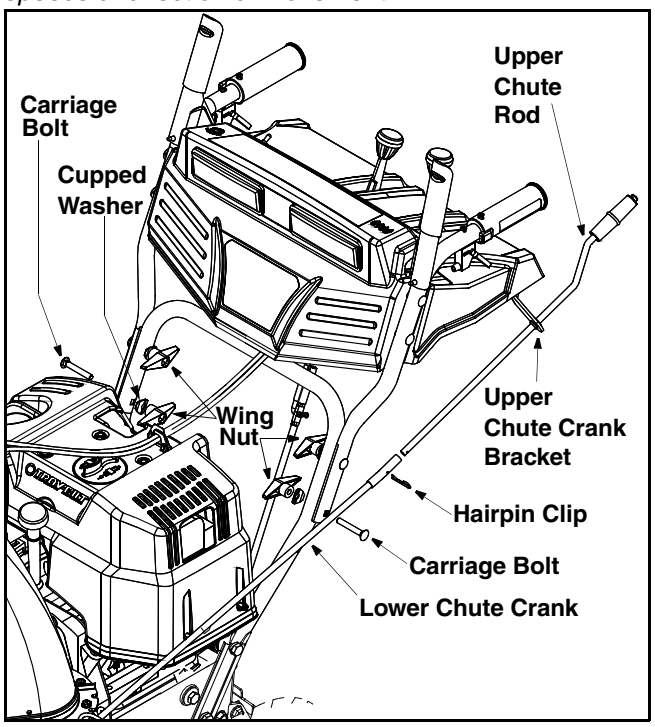


Figure 2

Attaching Chute Directional Control

- Remove the hairpin clip from the upper chute rod and slide the upper chute rod through the upper chute rod bracket and into the lower chute rod. A pair of pliers may help in this job.
- Align the two holes on both chute rods and insert the hairpin clip removed earlier, through these holes. See Figure 2.
- With the flange locknuts loosened on the lower chute crank bracket (see Figure 3) adjust the bracket so that the spiral on the chute crank fully engages the teeth on the chute assembly. Tighten the nuts on the lower chute crank bracket securely.

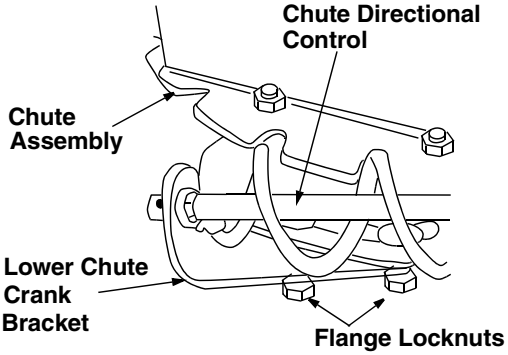


Figure 3

- If not already attached, slip the cables that run from the handle panel to the chute assembly into the cable guide located on top of the engine. See Figure 4.
- If not already attached, unwrap the headlight wire which is attached to the headlight, beneath the handle panel. Wind the headlight wire around the lower right handle until excess slack is removed. See Figure 4.

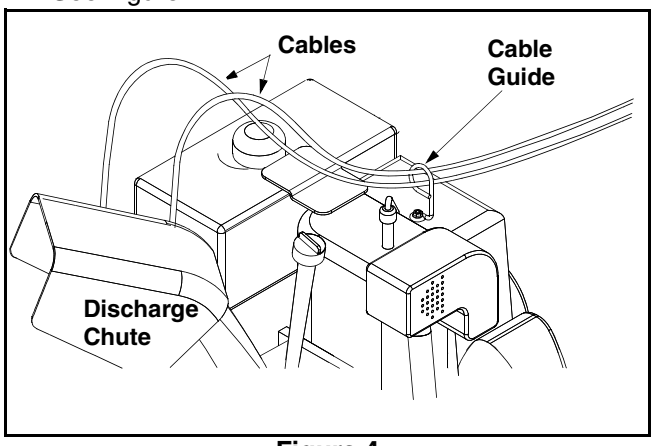


Figure 4

- Plug the wire from the headlight into the alternator lead coming from the right side of the engine underneath the fuel tank.

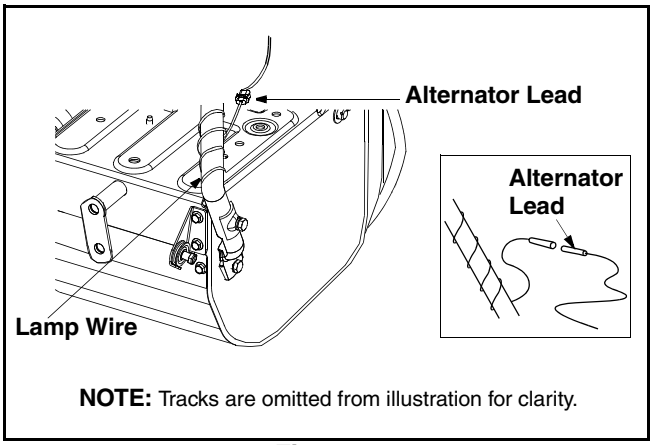


Figure 5

Clean-Out Tool

- This tool, along with the electric cord, is fastened with a cable tie to the rear of the auger housing for shipping purposes. Cut the cable tie and remove the electric cord before operating the snow thrower.

SECTION 3: KNOW YOUR SNOWTHROWER

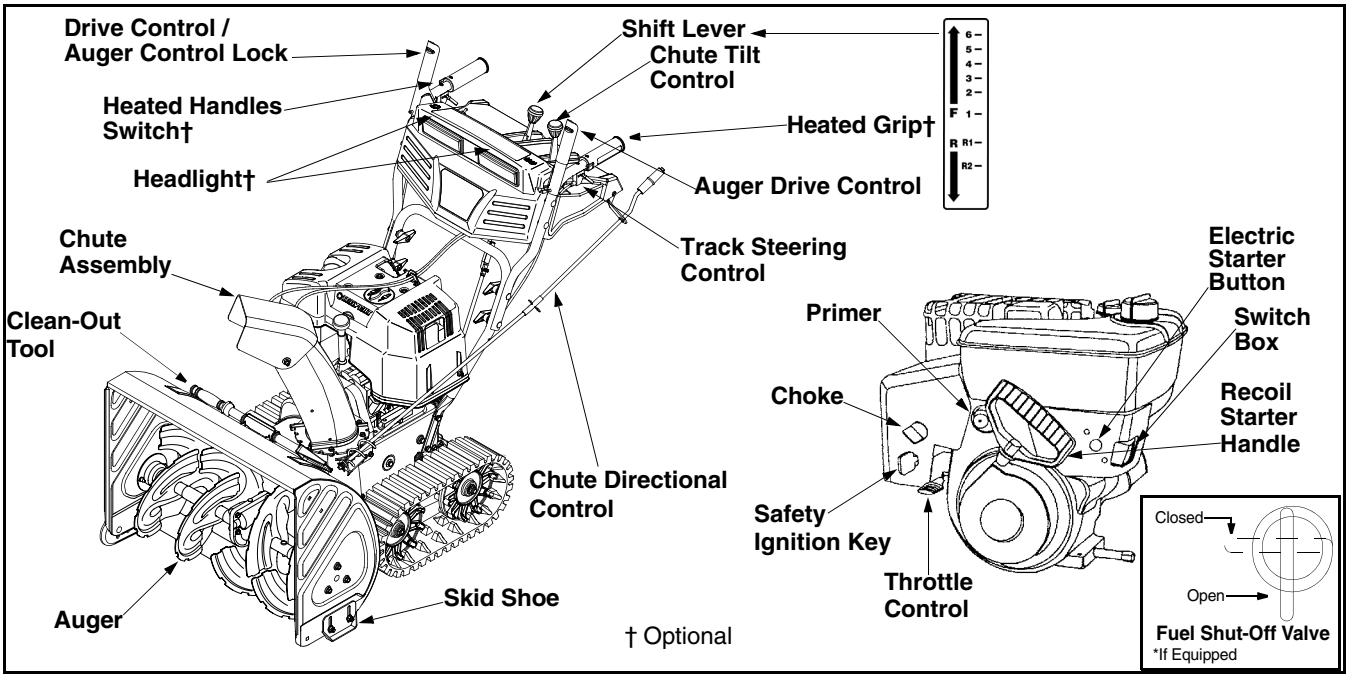


Figure 6

WARNING: Read, understand, and follow all instructions and warnings on the machine and in this manual before operating.

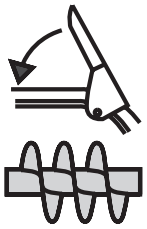
Drive Control / Auger Control Lock

The drive control is located on the right handle. Squeeze the drive control to engage the wheel drive. Release to stop. See Figure 6.

The drive control also locks the auger control so you can turn the chute directional control without interrupting the snow throwing process. If the auger control is engaged simultaneously with the drive control, the operator can release the auger control (on the left handle) and the augers will remain engaged. Release both controls to stop the augers and track drive.

IMPORTANT: Always release drive control before changing speeds.

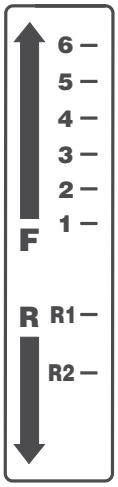
Auger Drive Control



The auger drive control is located on the left handle. Squeeze the control grip to engage the augers. Release to stop the snow throwing action. The drive control must also be released in order to stop auger. See Figure 6.

IMPORTANT: Refer to **Auger Control Test** on page 10 prior to operating your snow thrower. Read and follow all instructions carefully and perform all adjustments to verify your snow thrower is operating safely and properly.

Shift Lever



The shift lever is located in the center of the handle panel and is used to determine both ground speed and direction of travel. It can be moved into any of eight positions. See Figure 6.

IMPORTANT: Always release drive control before changing speeds.

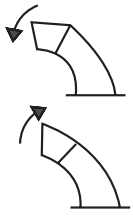
Forward

Your snow thrower has six forward (F) speeds, with position number one (1) being the slowest speed, and position number six (6) being the fastest.

Reverse

Your snow thrower has two reverse (R) speeds, R1 is the slower of the two.

Chute Tilt Control



The distance snow is thrown can be changed by adjusting the angle of the chute assembly. Move the chute tilt control forward to decrease the distance, toward the rear to increase.

Chute Crank

The chute crank is located on the left side of the snow thrower. Use it to change the direction in which snow is thrown. Avoid targeting persons, animals or cars and buildings.

Skid Shoe

The space between the shave plate and the ground can be adjusted by positioning the skid shoes. Refer to **Skid Shoe Adjustment** on page 12.

Clean-Out Tool

The clean-out tool is designed to clear a clogged chute. Refer to page 10 for instructions on how to properly use it.

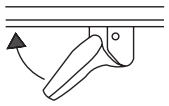
WARNING: Never use your hand to clear a clogged chute. Shut off engine and remain behind handles until all moving parts have stopped before unclogging.

Heated Handles Switch (on some models)

This switch is located on the right side of the snow thrower dash panel. To activate the heated handles, toggle the switch to the right to generate heat within the handle grips. Toggle the switch to the left to the OFF position after using the snow thrower. See Figure 6.

NOTE: *The heated handles grips are a compliment to, not a substitute for, proper cold weather outerwear for the operator's hands. It is recommended that the snow thrower operator wear gloves/mittens to avoid extremities of winter while operating this equipment.*

Track Steering Controls



The left and right track steering controls are located on the underside of the handles and they are used to assist in steering the snow thrower. Squeeze the right track control when turning right, squeeze the left control when turning left. Operate your snow thrower in open areas until you become familiar with these controls. See Figure 6.

NOTE: *It is easier to maneuver a non-running snow thrower with both track steering controls held in simultaneously.*

Throttle Control

The throttle control is located on the engine. It regulates the speed of the engine and will shut off the engine when pushed down completely. See Figure 6.

Fuel Shut-Off Valve (Optional Equipment)

On models so equipped, the fuel shut-off valve, located under fuel tank, controls fuel-flow from the fuel tank to the engine. See Figure 6.

Safety Ignition Key

The safety ignition key must be fully inserted and snapped in place before the unit will start. Remove the ignition key to prevent unauthorized use of equipment. See Figure 6.

IMPORTANT: Do NOT attempt to turn the key.

Headlight

The headlight is on whenever the engine is running.

Track Lock Lever

The track lock lever is located on the right side of the snow thrower and is used to select the position of the auger housing and the method of track operation. Move the lever to the right, then forward or backward to one of the three positions. See Figure 7.

Transport: Keeps the front end of the snow thrower up for easy transport. May also be used on many gravel driveways to clear snow while leaving gravel undisturbed.

Normal Snow: Allows the tracks to be suspended independently for continuous ground contact.

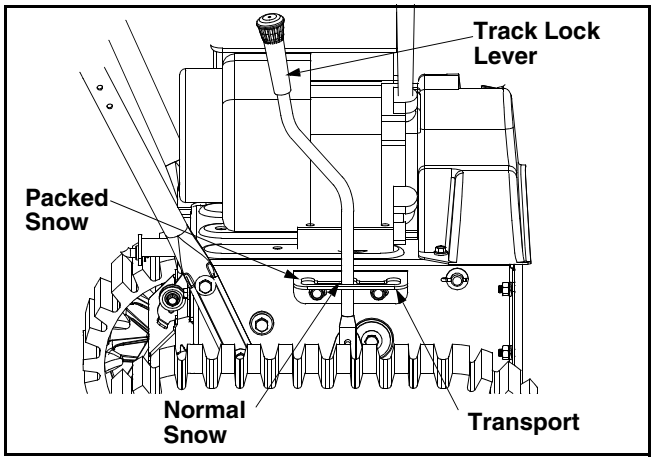


Figure 7

Packed Snow: Locks the front end of the snow thrower down to the ground for hard-packed or icy snow conditions.

SECTION 4: OPERATING YOUR SNOW THROWER

Before Starting

WARNING: Read, understand, and follow all instructions and warnings on the machine and in this manual before operating.

Gas And Oil Fill-up

Service the engine with gasoline and oil as instructed in the separate engine manual packed with your snow thrower. **Read instructions carefully.**

WARNING: Use extreme care when handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Never fuel machine indoors or while the engine is hot or running. Extinguish cigarettes, cigars, pipes and other sources of ignition.

To Start Engine

NOTE: *If unit shows any sign of motion (drive or augers) with the clutch grips disengaged, shut engine off immediately. Readjust as instructed in the Final Adjustments in the Assembly Section.*

- Attach spark plug wire to spark plug. Make certain the metal loop on end of the spark plug wire (inside the boot) is fastened securely over the metal tip on the spark plug.
- Make certain the fuel shut-off valve, if so equipped, is in the OPEN (vertical) position.
- Make certain the auger and drive controls are in the disengaged (up) position.
- Move throttle control up to FAST position. Insert ignition key into slot and snap in place. See Figure 6. Be certain it snaps into place. **Do not turn key.**

NOTE: *Engine will not start unless ignition key is inserted into ignition slot in carburetor cover.*

Electric Starter (optional)

- Determine that your house wiring is a three-wire grounded system. Ask a licensed electrician if you are not certain.
- If your house wiring system is not a three-wire grounded system, do not use this electric starter under any conditions.

WARNING: The electric starter is equipped with a grounded three-wire power cord and plug and is designed to operate on 120 volt AC household current. It must be used with a properly grounded three-prong receptacle at all times to avoid the possibility of electric shock. Follow all instructions carefully prior to operating the electric starter.

- If your home electrical system is grounded, but a three-hole receptacle is not available, one should be installed by a licensed electrician before using the electric starter.
- If you have a grounded three-prong receptacle, proceed as follows:
- Connect power cord to switch box on engine. Plug the other end of power cord into a three-prong, 120-volt, grounded, AC receptacle.
- Rotate choke knob to ON or FULL choke position (cold engine start). If engine is warm, place choke in OFF position instead of FULL.
- Push primer button three times for cold engine start, making sure to cover vent hole in primer button when pushing. DO NOT use primer to restart a warm engine after a short shutdown.
- Push starter button to start engine.
- When engine starts, release starter button, and move choke gradually to OFF. If engine falters, move choke immediately to ON or FULL and then gradually to OFF.
- When disconnecting the power cord, always unplug from the three-prong receptacle first and then from the snow thrower.

Recoil Starter

- Rotate choke knob to ON or FULL choke position (cold engine start). If engine is warm, place choke in OFF position instead of ON or FULL.
- Push primer button three times for cold engine start. DO NOT use primer to restart a warm engine after a short shutdown.

NOTE: *Always cover vent hole in primer button when pushing. Additional priming may be necessary for first start if temperature is below 15°F (-9°C).*

- Grasp starter handle and pull rope out slowly, until it pulls slightly harder. Let rope rewind slowly.
- Pull starter handle rapidly. Do not allow handle to snap back. Allow it to rewind slowly while keeping a firm hold on the starter handle.
- Repeat the previous steps until engine starts.
- As engine warms up, rotate choke knob slowly to OFF position. If engine falters, return to FULL choke, then slowly move to OFF position

To Stop Engine

- Run engine for a few minutes before stopping to help dry off any moisture on the engine.
- To help prevent possible freeze-up of starter, proceed as follows:

Electric Starter:

- Connect power cord to switch box on engine, then to 120 volt AC receptacle. With the engine running, push starter button and spin the starter for several seconds. The unusual sound made by spinning the starter will not harm engine or starter. Disconnect the power cord from receptacle first, and then from switch box.

Recoil Starter

- With engine running, pull starter rope with a rapid, continuous full arm stroke three or four times. Pulling the starter rope will produce a loud clattering sound, which is not harmful to the engine or starter.
- Move throttle control to “stop” or “off” position.
- Remove ignition key (DO NOT turn key) to prevent unauthorized use of equipment.
- Disconnect the spark plug wire from the spark plug to prevent accidental starting while equipment is unattended.

NOTE: *Do not lose ignition key. Keep it in a safe place. Engine will not start without ignition key.*

- Wipe all snow and moisture from the carburetor cover in the area of the control levers. Also, move control levers back and forth several times.

To Engage Drive

- With the engine running near top speed, move shift lever to one of the eight positions to set desired speed and direction. Select speed appropriate for the snow conditions that exist.

NOTE: *Use slower speeds in higher snow and/or until you are familiar with the snow thrower operation.*

- Squeeze drive control against the right handle to move the snow thrower; release it to stop.

IMPORTANT: NEVER move the shift lever without first releasing the drive control. Doing so will cause premature wear on the drive system’s friction wheel.

To Engage Augers

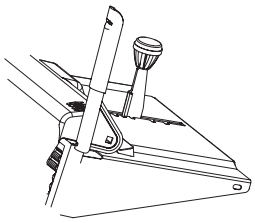
- To engage augers and start snow throwing, squeeze the auger control against the left handle.
- To disengage power to the augers, release both the auger control and the drive control, if engaged.

NOTE: *The drive control also locks the auger control so you can turn the chute directional control without interrupting the snow throwing process. If the auger control is engaged simultaneously with the drive control, the operator can release the auger control (on the left handle) and the augers will remain engaged. Release both controls to stop the augers and track drive.*

Auger Control Test

IMPORTANT: Perform the following test before operating your snow thrower for the first time and at the start of each winter season.

Check the adjustment of the auger control as follows:

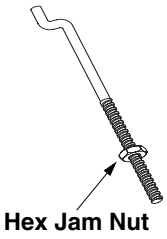


- When the auger control is released and in the disengaged “up” position, the cable should have very little slack. It should NOT be tight.

WARNING: Do not over-tighten the cable. Over-tightening may prevent the auger from disengaging and compromise the safety of the snow thrower.

- In a well-ventilated area, start the snow thrower engine as instructed earlier in this section under the heading “Starting Engine”. Make sure the throttle is set in the FAST position.
- While standing in the operator’s position (behind the snow thrower), engage the auger.
- Allow the auger to remain engaged for approximately ten (10) seconds before releasing the auger control. Repeat this several times.
- With the engine running in the FAST position and the auger control in the disengaged “up” position, walk to the front of the machine.
- Confirm that the auger has completely stopped rotating and shows NO signs of motion.

IMPORTANT: If the auger shows ANY signs of rotating, immediately return to the operator’s position and shut off the engine. Wait for ALL moving parts to stop before re-adjusting the auger control.



- To readjust the control cable, loosen the hex jam nut on the auger control cable “Z” fitting.
- Thread the ferrule without turning the cable onto the “Z” fitting until there is no slack in the cable. See Figure 8. Do not overtighten the cable. Hold the flats on the ferrule with pliers and tighten the jam nut against the ferrule.
- Rotate the coupling end of the cable counterclockwise to provide more slack.
- Retighten the hex jam nut. See Figure 8.
- Repeat Auger Control Test to verify proper adjustment has been achieved.

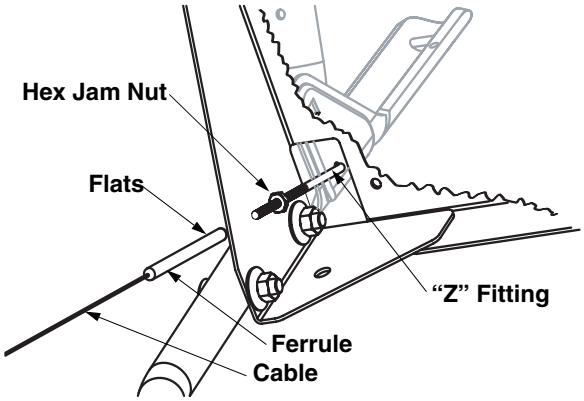


Figure 8

Clean-Out Tool

The chute clean-out tool is conveniently fastened to the rear of the auger housing with a mounting clip. **Never** use your hand to clean a clogged chute or chute opening; use this clean-out tool instead.

- Release both the Auger Control and the Drive/ Auger Control Lock.
- Stop the engine by moving the throttle to the stop position.
- Remove the clean-out tool from the mounting clip. See Figure 6.
- Use the shovel-shaped end of the clean-out tool to dislodge and scoop any snow and ice which has formed in and near the chute assembly.

WARNING: Never use your hands to clean snow and ice from the chute assembly or auger housing.

- Refasten the clean-out tool to the mounting clip on the rear of the auger housing, reinsert the ignition key and start the snow thrower’s engine.
- While standing in the operator’s position (behind the snow thrower), engage the auger control for a few seconds to clear any remaining snow and ice from the chute before continuing to clear snow.

Drift Cutters (If Equipped)

Drift cutters should be used when operating the snow thrower in heavy drift conditions.

On models so equipped, drift cutters are assembled to the auger housing inverted. Remove the carriage bolts by unthreading the hex nuts which secure them, and reinstall the drift cutters in their proper position before operating the snow thrower. See Figure 9.

If your unit is not equipped with drift cutters, contact Customer Support as instructed on page 2 for information regarding price and availability.

Snow Thrower Model	Drift Cutter Kit
All models	OEM-390-679

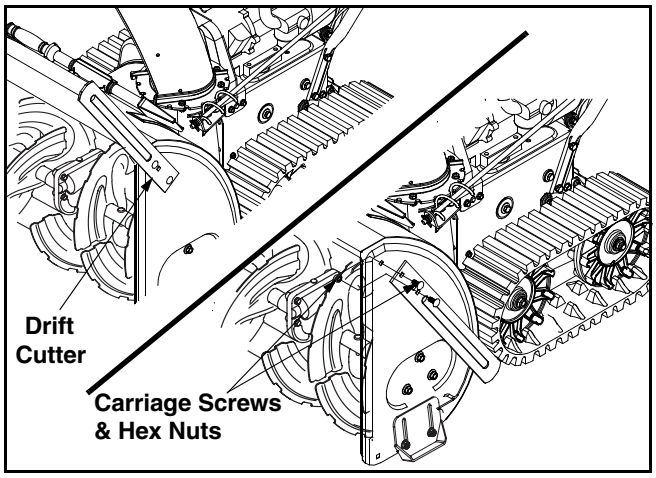


Figure 9

Operating Tips

NOTE: *Allow the engine to warm up for a few minutes. The engine will not develop full power until it reaches operating temperature.*

NOTE: The temperature of the muffler and the surrounding areas may exceed 150°F (65°C).

- For the most efficient snow removal, remove snow immediately after it falls.
- Discharge the snow downwind whenever possible.
- Slightly overlap each previous path.
- Set the skid shoes 1/4" below the shave plate for normal usage. The skid shoes may be adjusted upward (to lower the shave plate) for hard-packed snow. Adjust downward (to raise the shave plate) when using on gravel or crushed rock.
- Be certain to follow the precautions found in the “To Stop Engine” section to prevent possible freeze-up.
- Clean the snow thrower thoroughly after each use.

SECTION 5: MAKING ADJUSTMENTS

WARNING: NEVER attempt to make any adjustments while the engine is running, except where specified in the operator’s manual.

Chute Assembly

The distance snow is thrown can be adjusted by adjusting the angle of the chute assembly. Refer to “Know Your Snowthrower” for instructions.

The remote chute control cables have been pre-adjusted at the factory. Move the remote chute lever on the control panel back and forward to adjust angle of the chute assembly.

Auger Control

Refer to Auger Control Test in the Operating Section to adjust the auger control.

Drive Control and Shift Lever

To check the adjustment of the drive control and shift lever, proceed as follows:

- With the engine off, move the shift lever all the way forward to the highest speed. With the drive control lever released, push the snow thrower forward. The unit should roll forward. Then engage the drive control. The tracks should stop turning.
- Now release the drive control and push the unit again.
- Move the shift lever back to the fast reverse position then all the way forward again. There should be no resistance in the shift lever, and the tracks should keep turning.
- If you have resistance when moving the shift lever or the tracks stop when they should not, loosen the jam nut on the drive control cable and unthread the cable one turn.
- If the tracks do not stop when you engage the drive control, loosen the jam nut on the drive control cable and thread the cable in one turn.
- Recheck the adjustment and repeat as necessary. Tighten the jam nut to secure the cable when correct adjustment is reached.

WARNING: Drain the gasoline out of the snow thrower’s tank, or place a piece of plastic film under the gas cap to avoid spillage BEFORE making the adjustment.

To test further for correct adjustment, if necessary, proceed as follows:

- Tip the snow thrower forward, allowing it to rest on the auger housing. See Figure 10.
- Remove the frame cover underneath the snow thrower by removing the six self-tapping screws.
- With the drive control released, there must be clearance between the friction wheel and the drive plate in all positions of the shift lever. See Figure 11.

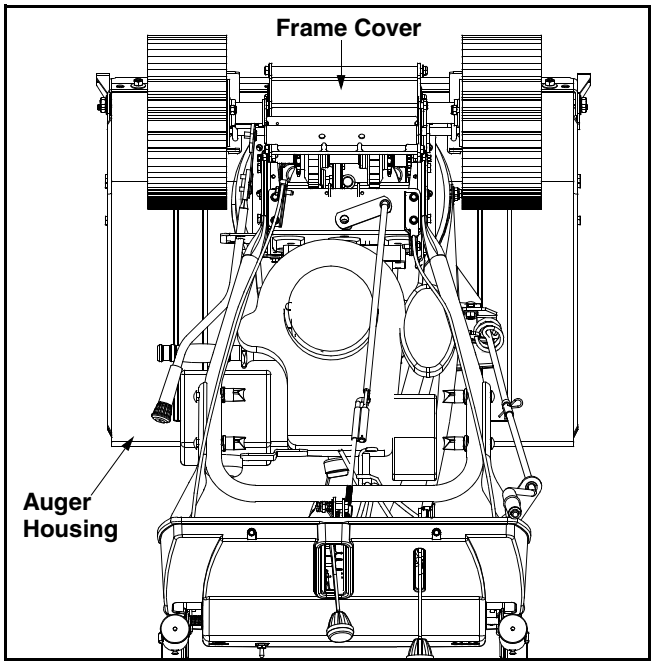


Figure 10

- With the traction control lever engaged, the friction wheel must contact the drive plate. See Figure 11.

If adjustment is necessary:

- Loosen the jam nut on the traction cable and thread the cable in or out as necessary.
- Retighten the jam nut to secure the cable when correct adjustment is reached.
- Reassemble the frame cover.

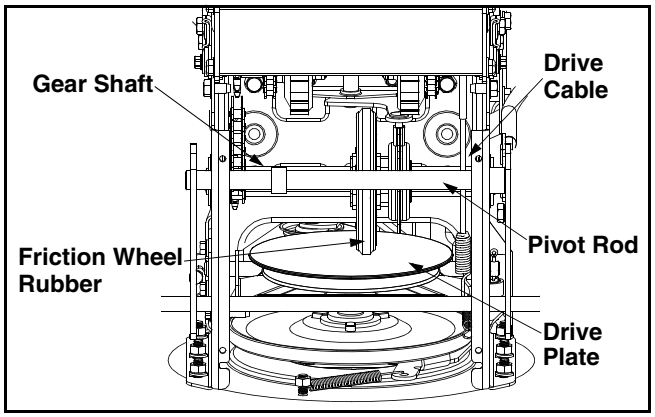


Figure 11

NOTE: *If you placed plastic film under the gas cap, be certain to remove it before operating the snow thrower.*

Shift Rod Adjustment

- Remove the hairpin clip and flat washer from the shift handle under the handle panel. See Figure 12.
- Place shift lever in sixth (6) position or fastest forward speed.
- Push shift arm assembly down as far as it will go.
- Rotate the ferrule up or down on the shift rod as necessary until the ferrule lines up with the upper hole in the shift lever. See Figure 12.
- Insert ferrule from the left side of the snow thrower into the upper hole.
- Reinstall the hairpin clip and the washer.

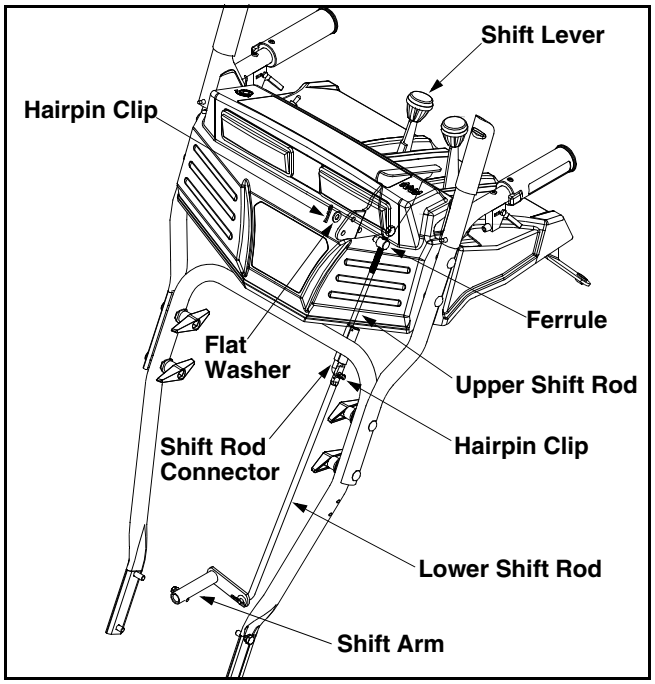


Figure 12

IMPORTANT: Make certain to check for correct adjustment of the shift rod as instructed under “Drive Control and Shift Lever” on page 11, before operating the snow thrower.

Skid Shoe

The space between the shave plate and the ground can be adjusted by raising or lowering the skid shoes.

For close snow removal, as when using on a smooth concrete or asphalt driveway, place the skid shoes in the low position. Use the middle or high position when the area to be cleared is uneven. When operating on gravel, always put skid shoes in the high position. See Figure 13.

Adjust skid shoes as follows:

- Loosen, but do not remove, the three hex nuts which fasten the skid shoe to the auger housing.
- Raise or lower the skid shoe to desired position.
- Retighten the hex nuts loosened earlier.
- Repeat on the other side of the snow thrower.

NOTE: *Make certain the bottom surface of skid shoe is flat against the ground to avoid uneven wear.*

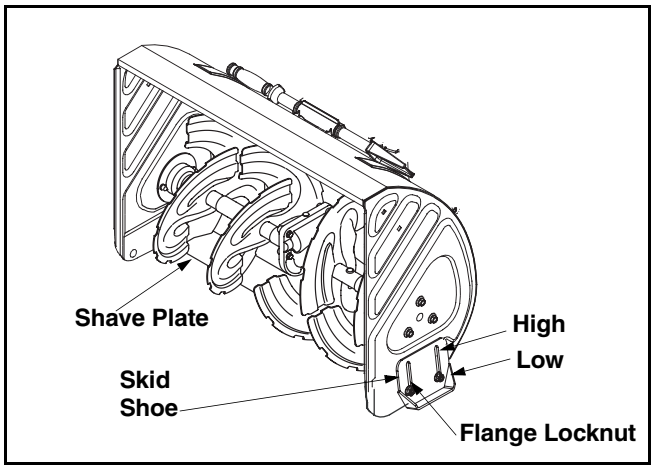


Figure 13

Carburetor

- Minor carburetor adjustment may be required to compensate for differences in fuel, temperature, altitude and load.
- Refer to the separate engine manual, packed with your unit, for carburetor adjustment information.

SECTION 6: MAINTAINING YOUR SNOW THROWER

WARNING: Before lubricating, repairing, or inspecting, disengage all clutch levers and stop engine. Wait until all moving parts have come to a complete stop. Disconnect spark plug wire and ground it against the engine to prevent unintended starting. Always wear safety glasses during operation or while performing any adjustments or repairs.

Lubrication

Engine

Refer to the separate engine manual packed with the snowthrower for detailed instructions regarding all engine-related maintenance.

WARNING: If any adjustments need to be made to the engine while the engine is running (e.g. carburetor), keep clear of all moving parts. Be careful of muffler, engine and other surrounding heated surfaces.

Drive / Auger Control Lock

The cams on the ends of the control rods which interlock the drive and auger controls must be lubricated at least once a season or every 25 hours of operation. The cams can be accessed beneath the handle panel. Use a multi-purpose automotive grease. See Figure 14.

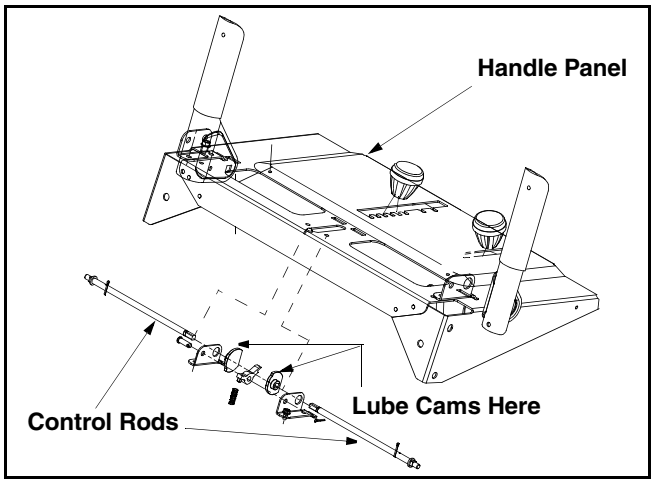


Figure 14

Gear Case

The gear case is lubricated with grease at the factory and it does not require checking. If disassembled for any reason, lubricate with 2 ounces of Shell Alvania grease EPR00, part number 737-0168. Before reassembling, remove old sealant and apply new sealant.

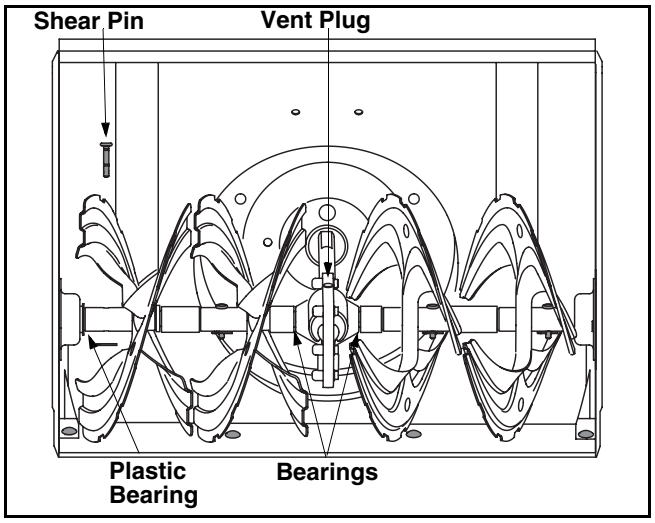


Figure 15

To check the level of grease in the gear case, remove the vent plug. If your unit is equipped with a grease fitting**,** you may, if necessary, add grease using a grease gun and the grease fitting on the side of the gear case.

IMPORTANT: Do not overfill the gear case, since damage to the seals could result. Be sure the vent plug is free of grease in order to relieve pressure.

Auger Shaft

- At least once a season, remove the shear pins from the auger shaft and spray lubricant inside the shaft. See Figure 15.
- On certain models, grease fittings can be found at either end of the auger shaft. Lubricate with a grease gun once a season.

Auger Bearings

Every season lubricate the auger bearings and the bearings on the side of the frame with light oil. See Figure 15.

Drive and Shifting Mechanism

Lubricate at least once a season or after every 25 hours of operation. Remove the rear cover, lubricate any chains, sprockets, gears, bearings, shafts, and shifting mechanism at least once a season. Use engine oil or a spray lubricant. **Avoid getting oil on the friction wheel rubber and aluminum drive plate.** Refer to Figure 11.

There is a grease fitting on the top of the axle shaft which drives the rear track drive wheels on both sides of the unit. Grease these fittings every 25 hours or once a season.

Gear Shaft

Lubricate the gear shaft with 6-n-1 grease at least once a season or after every 25 hours of operation (available at automotive stores, or order part number 737-0170). Refer to Figure 11.

IMPORTANT: Keep all grease and oil off of the rubber friction wheel and aluminum drive plate.

Chute Directional Control

The worm gear on the chute directional control should be greased with multipurpose automotive grease.

SECTION 7: SERVICING YOUR SNOW THROWER

WARNING: Before servicing, repairing, or inspecting, disengage all controls and stop engine. Wait until all moving parts have come to a complete stop. Disconnect spark plug wire and ground it against the engine to prevent unintended starting. Always wear safety glasses during operation or while performing any adjustments or repairs.

Augers

- The augers are secured to the spiral shaft with shear pins and bow tie cotter pins. If you hit a hard foreign object or ice jam, the snow thrower is designed so that the pins may shear. Refer to Figure 17.
- If the augers will not turn, check to see if the pins have sheared. Replacement shear pins and cotter pins have been provided with the snow thrower. When replacing pins, spray an oil lubricant into shaft before inserting new pins.

IMPORTANT: NEVER replace the auger shear pins with standard pins. Any damage to the auger gearbox or other components as a result of doing so will NOT be covered by your snow thrower's warranty.

Shave Plate and Skid Shoes

- The shave plate and skid shoes on the bottom of the snow thrower are subject to wear. They should be checked periodically and replaced when necessary.

- Remove the carriage bolts and flange lock nuts which attach the two skid shoes to the snow thrower on two sides. See Figure 16.

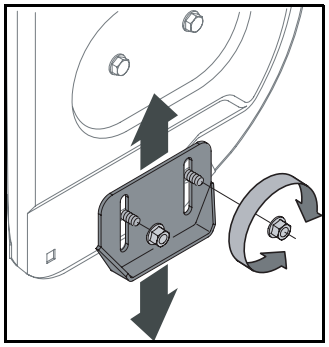


Figure 16

- Reassemble new skid shoes with the hardware removed earlier. Make certain the skid shoes are adjusted to be level.
- To remove the shave plate, remove the carriage bolts and flange lock nuts which attach the shave plate to the snow thrower housing. See Figure 17.

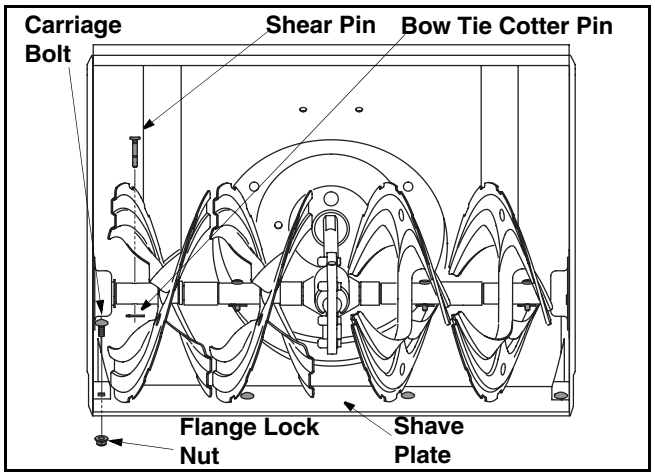


Figure 17

- Reassemble the new shave plate, with heads of carriage bolts to the inside of the housing. Tighten securely.

Belt Removal And Replacement

Auger Belts

NOTE: *It is necessary to remove both belts in order to change either one. If changing just one belt, be certain to check the condition of the other belt.*

- Disconnect the chute directional control at the discharge chute end by removing the hairpin clip and the flat washer. See Figure 18A.

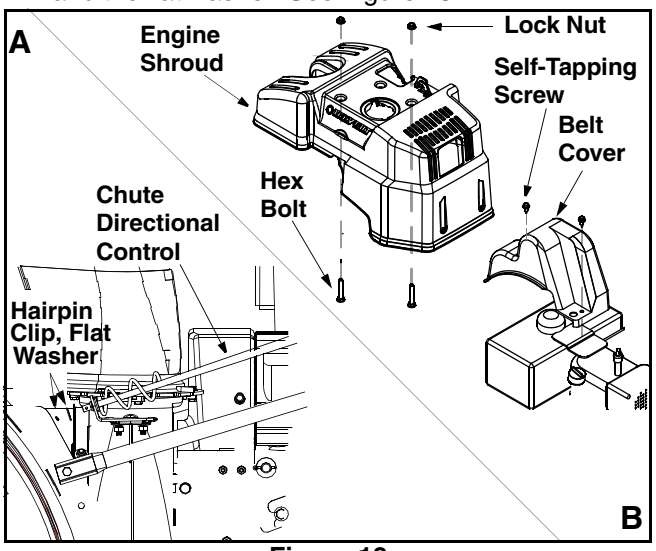


Figure 18

- Remove the engine shroud by removing the lock nuts and bolts securing it. See Figure 18B.
- Remove the plastic belt cover at the front of the engine by removing the two self-tapping screws. See Figure 18B.
- Drain the gasoline from the snow thrower, or place a piece of plastic film under the gas cap.
- Tip the snow thrower up and forward so that it rests on its auger housing. Refer to Figure 10.
- Remove the six self-tapping screws from the frame cover underneath the snow thrower.
- Roll the front and rear auger belts off the engine pulley. See Figure 19.
- Unhook the idler spring from the hex bolt on the auger housing. See Figure 20.
- Back out the stop bolt until the support bracket rests on the auger pulley. See Figure 21.

NOTE: *Loosening the six nuts that connect the frame to the auger housing may aid in belt removal.*

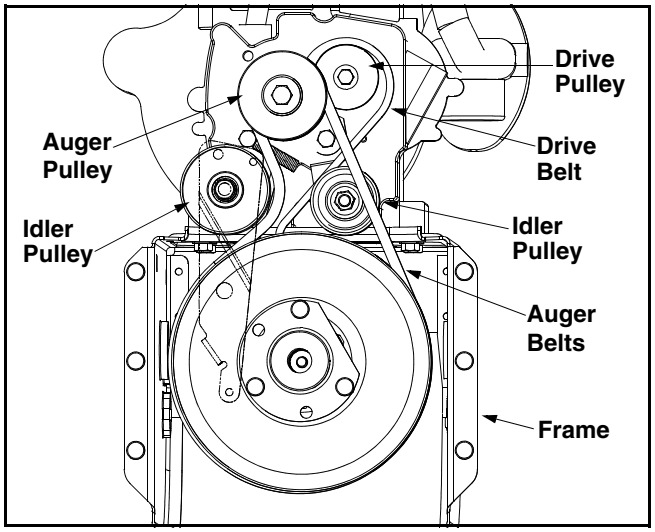


Figure 19

- Lift the auger belt from the auger pulley, and slip belt between the support bracket and the auger pulley. Repeat this step for the front auger belt. See Figure 20.
- Replace both auger drive belts by following instructions in reverse order.

NOTE: *If you placed plastic film under the gas cap, be certain to remove it before operating the snow thrower.*

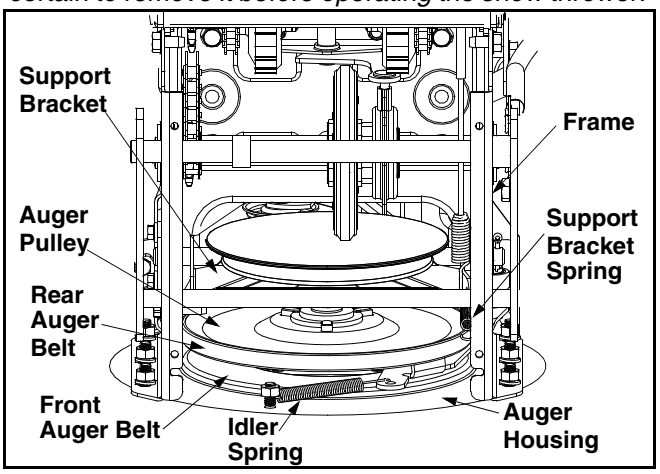


Figure 20

Drive Belt

- Follow the first six steps of the instructions for servicing the auger belts.
- Pull the idler pulley up and lift the belt off the engine pulley and friction wheel disc. See Figure 19.
- Back out the stop bolt until the support bracket rests on the auger pulley. See Figure 21.
- Slip the belt between the friction wheel and drive disc. Remove and replace the belt. Reassemble following the instructions in reverse order.

NOTE: *The support bracket must rest on the stop bolt after the new belt has been assembled. See Figure 21.*

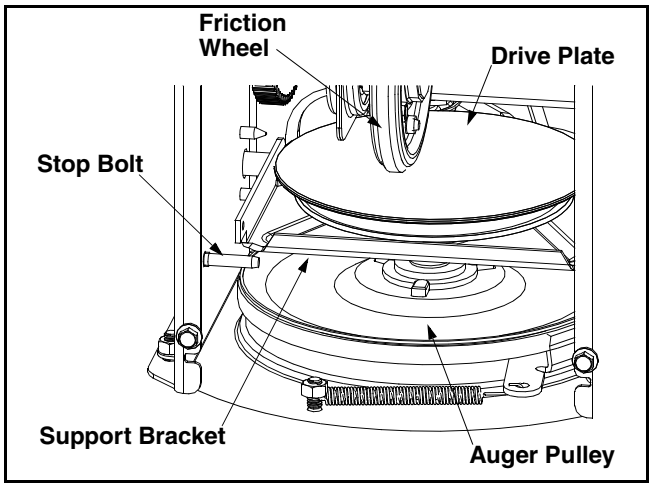


Figure 21

Replacing Friction Wheel Rubber

The rubber on the friction wheel is subject to wear and should be checked after 25 hours of operation, and periodically thereafter. Replace the friction wheel rubber if any signs of wear or cracking are found.

- Drain the gasoline from the snow thrower.
- Tip the snow thrower up and forward, so that it rests on the housing. Refer to Figure 10.
- Remove six self-tapping screws from the frame cover underneath the snow thrower.
- Using a 7/8" wrench to hold the shaft, loosen, but do not completely remove, the hex bolt and cupped washer on the left end of gear shaft. See Figure 22.
- Lightly tap the hex nut to dislodge the ball bearing from the right side of frame before removing the hex nut and bell washer from left end of shaft.
- Move the gear shaft to the right and slide the friction wheel assembly from the shaft. See Figure 23A.
- Remove the four screws from the friction wheel assembly. See Figure 23B.
- Remove the friction wheel rubber from between the friction wheel plates.
- Reassemble new friction wheel rubber to the friction wheel plates and hub, tightening the four screws in rotation and with equal force.

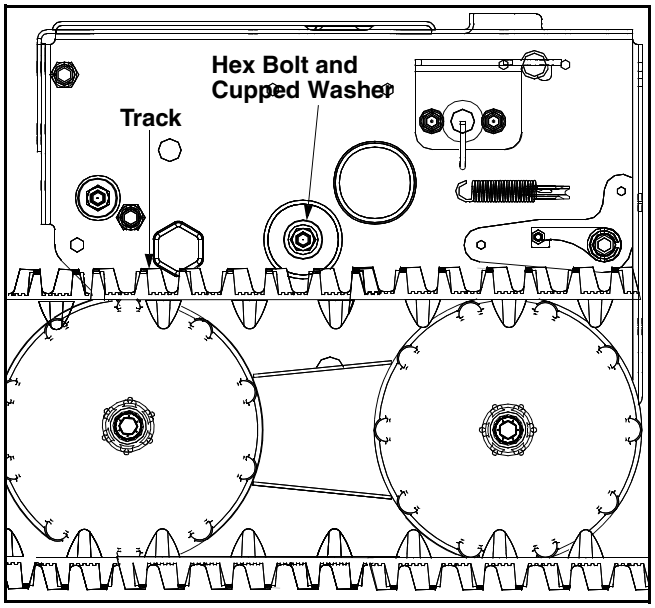


Figure 22

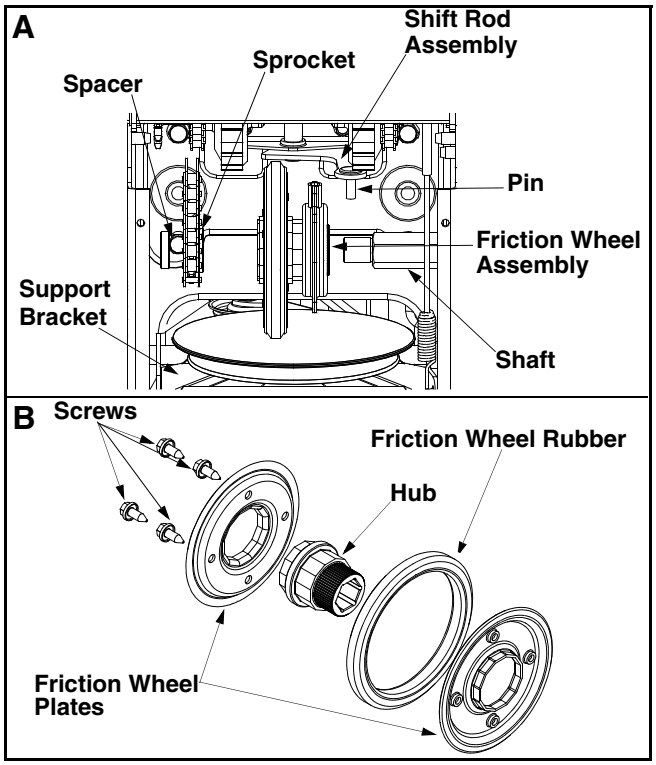


Figure 23

- Position the friction wheel assembly up onto the pin of the shift rod assembly, and slide the shaft through the assembly. Reassemble in reverse order.

Engine

Refer to the separate engine manual packed with your unit.

Off-Season Storage

WARNING: Never store the machine or fuel container indoors where there is an open flame, spark, or pilot light such as on water heater, furnace, clothes dryer, or other gas appliance.

If unit is to be stored over 30 days, prepare for storage as instructed in the separate engine manual packed with your snow thrower.

- Clean snow thrower thoroughly.
- Lubricate as instructed in the ***Maintaining Your Snow Thrower*** section of this manual.
- Store the snow thrower in a clean, dry area.

NOTE: *When storing any type of power equipment in a poorly ventilated or metal storage shed, care should be taken to rustproof the equipment, especially springs, cables and all moving parts.*

SECTION 8: TROUBLESHOOTING

Problem	Cause	Remedy
Engine fails to start.	1. Fuel tank empty, or stale fuel. 2. Blocked fuel line. 3. Choke not in ON position 4. Faulty spark plug. 5. Safety key not in ignition switch on engine. 6. Spark plug wire disconnected. 7. Primer button not being used properly.	1. Fill tank with fresh gasoline. 2. Clean the fuel line. 3. Move switch to ON position 4. Clean, adjust gap or replace. 5. Insert the key fully into the switch. 6. Connect spark plug wire. 7. Refer to the engine manual.
Engine runs erratic.	1. Unit running on CHOKE. 2. Blocked fuel line or stale fuel. 3. Water or dirt in fuel system. 4. Carburetor out of adjustment.	1. Move choke lever to OFF position. 2. Clean fuel line and fill tank with clean, fresh gasoline. 3. Drain fuel tank and carburetor. Refill with fresh fuel. 4. Refer to the engine manual.
Loss of power.	1. Spark plug wire loose. 2. Gas cap vent hole plugged. 3. Exhaust port plugged.	1. Connect and tighten spark plug wire. 2. Remove ice and snow from gas cap. Be certain vent hole is clear. 3. Refer to the engine manual.
Engine overheats.	1. Carburetor not adjusted properly.	1. Refer to the engine manual or have the carburetor adjusted by an authorized engine service dealer.
Excessive vibration.	1. Loose parts or damaged auger.	1. Stop engine immediately and disconnect spark plug wire. Tighten all bolts and nuts. If vibration continues, have unit serviced by an authorized service dealer.
Unit fails to propel itself.	1. Traction control cable in need of adjustment. 2. Drive belt loose or damaged.	1. Adjust traction control cable. Refer to Adjustments. 2. Replace drive belt.
Unit fails to discharge snow.	1. Discharge chute clogged. 2. Foreign object lodged in auger. 3. Auger control cable in need of adjustment. 4. Auger belt loose or damaged. 5. Shear pin(s) sheared.	1. Stop engine immediately and disconnect spark plug wire. Clean discharge chute and inside of auger housing. 2. Stop engine immediately and disconnect spark plug wire. Remove object from auger. 3. Refer to Auger Control Test, Operating Your Snowthrower Section. 4. Refer to Maintenance Section 5. Replace shear pin(s).

NOTE: *For repairs beyond minor adjustments listed above, contact the local dealer.*

SECTION 9: TWO YEAR SUPREME WARRANTY:

For two years from date of retail purchase within Canada, MTD PRODUCTS LIMITED will, at its option, repair or replace, for the original purchaser, free of charge, any part or parts found to be defective in material or workmanship. This warranty covers units which have been operated and maintained in accordance with the owner's instructions furnished with the unit, and which have not been subject to misuse, abuse, commercial use, neglect, accident improper maintenance or alteration. Normal wear parts or components thereof are subject to special terms as noted below in the NO FAULT Ninety Day Consumer Warranty clause.

The engine, starter motor or component parts thereof carry separate warranties from their manufacturers. Please refer to the applicable manufacturer's warranty policy for these items.

NO FAULT Ninety Day Consumer Warranty on Normal Wear Parts: All normal wear part failures will be covered on this product for a period of 90 days regardless of cause. After 90 days but within the two year warranty period, normal wear part failures will be covered if caused by defects in material or workmanship of other component parts. Normal wear parts are defined as batteries, belts, blades, blade adaptors, grass bags, rider deck wheels, seats, tires and clutch parts (friction wheels).

Full Ninety Day Warranty on Battery: For ninety (90) days from the date of retail purchase, if any battery included with this unit proves defective in material or workmanship and our testing determines the battery will not hold a charge, MTD PRODUCTS LIMITED will replace the battery at no charge to the original purchaser.

Additional Limited Thirty Day Warranty on Battery: After ninety (90) days but within one hundred twenty (120) days from the date of purchase, MTD PRODUCTS LIMITED will replace the defective battery, for the original purchaser, for a cost of one -half (½) of the current retail price of the battery in effect at the date of return.

How to Obtain Service: Warranty service is available, with proof of purchase, through your local MTD Authorized Service Dealer. If you do not know the dealer in your area, please write to the Service Department of MTD PRODUCTS LIMITED, P.O. BOX 1386, KITCHENER, ONTARIO N2G 4J1. The return of a complete unit will not be accepted by the factory unless prior written permission has been extended by MTD PRODUCTS LIMITED.

Other Warranties: All other warranties, express or implied, including any implied warranty of merchantability is limited in its duration to that set forth in this express limited warranty. The provisions as set forth in this warranty provide the sole and exclusive remedy of MTD PRODUCTS LIMITED obligations arising from the sale of its products. MTD PRODUCTS LIMITED will not be liable for incidental or consequential loss or damage.